**STASIS: The Road to Semantic Interoperability**

STASIS is promoted by 13 European and Chinese organisations and aims to enable stakeholders to participate in the eEconomy more efficiently. This will be achieved by developing and validating software applications that will facilitate semantic based business connections and so assist in reducing business transformation costs.

STASIS (SoFТware for Ambient Semantic Interoperable Services) is a Research and Development project sponsored under the European Commission’s 6th Framework programme as well the project partners. Its objective is the research, development and validation of open, webServices based, distributed semantic services for SME empowerment within the automotive, furniture and other sectors.

The STASIS vision is based around the simple statement:

“If I have information in my format, and it is integrated into my systems, I want to put minimal effort into mapping this into any format (standardized or not) to do electronic business with another party”

STASIS commenced September 1st 2006 and will last for 3 years until August 2009 with a total budget of €4M. 13 Partners are involved including commercial companies (TIE, Porthus, iSoft), academics (Universities of Sunderland, Oldenberg, Modena & Reggio Emilia, Tsinghua) and user organisations (AIDIMA, Mariner, Shanghai Sunline, Foton, TANET, ZF Friedrichshafen AG) and these are led by the managing partner TIE and formal coordinator AIDIMA.

From a business perspective, user requirements and insight are key to STASIS; “As a company with over 50,000 employees with worldwide sites and resources there are significant costs in mapping our internal applications and partners into our network at the technical level” said ZF Vice President IT, Dr. Horst Pfeifer. “STASIS will offer a content-based mapping facility which will intelligently leverage from real business terms rather than the bits and bytes of technology which we believe will quicken future internal and external implementations especially in the initiation phase of new business opportunities”.

STASIS has a strong international perspective involving many European states, and there are also several Chinese partners engaged through the EU-China Science and Technology agreement. The validation will be focused around the strong industrial users in the automotive and furniture sectors, although the project is not sector specific and these are test-beds.
Additional sectors will be addressed through the partners’ strong links to major standardisation and interoperability organisations within Europe and beyond, including the European Standards organisations: e-Business Board for European Standardisation (CEN/eBES), the eBusiness Interoperability Forum (CEN/eBIF) and the United Nations CEFACT organisation. STASIS is committed to interact with these and other open standards/bodies. All of the final specifications/techniques will be openly available, and some deliverables will also include open source components.

Semantic Gap

STASIS addresses the “semantic gap” in eBusiness interactions that causes up to 60% of integration cost. Lightweight semantic tools and infrastructures help to easily align interfaces to ensure agility in eBusiness. Ontology based technologies suitable for application in daily business form the core of STASIS to help individual eBusiness’ understand information structures of eBusiness Standards, and those of their trading partners. STASIS allows business partners to build open communities that define and share the semantics of the information exchanged in their domain.

Why STASIS: To improve or sustain financial performance, supply chains are forced to organise themselves in networked electronic structures. The key success factor for these networked businesses is the efficiency of their operations so that the potential of the partnerships are not swept away through complexities, difficulties and the overall cost of implementation.

Why Europe-China: eBusiness and supply-chain issues are clearly not nation specific. Organisations are dealing across European boundaries, and with other economies such as China and other Asian nations both as competitors, customers and suppliers. However, for the benefit of all, open solutions are needed which allow all these parties to interact at a semantic level. This will facilitate the exploitation of often under-deployed eBusiness applications currently in place with perhaps just one company as a partner.

Why semantic interoperability: Today there are initiatives to address theoretical approaches such as semantic web, topic maps etc….to form metadata structures such as RDF or OWL….to establish international formats such as UBL and GS1…but there is no one initiative that is known to address in a valid way the real-world issues that are missing, such as:-

- How can I keep my own semantics without being forced to use those of other partners?
- Why do I need to invest and keep track of standards when I have neither the time nor money?
- How can I link the semantics of my documents and messages with those of my customers without paying huge consultancy fees?
- How can I create new data structures which are based on real world use rather than theory?
- How is it possible I can trade with any party with minimal reconfiguration no matter what their country, language?
- Can you present me something whereby I can utilise any data structure (EDI, XML…) yet the semantic knowledge is retained?

STASIS is the project that will change this by offering services and applications based on the open SEEMseed (www.seemseed.net) registry and repository network, and which will allow Corporates and SMEs easy access to Analyse, View, Compare and Distil semantics in an environment that is efficient for them. It will not standardise the ontologies or structures but make use of them to allow weighted decisions to be made. It will allow all parties the flexibilities they need, yet allow those that offer most – typically those of well supported market user – to be taken advantage of by all market players.

- STASIS Semantic Analysis Tool to examine semantics
- STASIS Beacons. Federated registries and repositories forming the STASIS Flock
- STASIS Comparator to compare semantics
- The STASIS Viewer for read only design time
- Distributed Information Purifier to remove conflicting information
- RCS: Repository connection services

www.stasis-project.net